IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A carrier comprising:

a magnetic core material; and

a layer located on a surface of the magnetic core material,

wherein the carrier satisfies the following relationships (1) to (3):

$0.90 \leqq (\sigma a/\sigma b) < 1.00$ (1)

$200 \leqq (\sigma b \cdot \rho c) \leqq 400$ (2)

$10 \leqq (\sigma b/\rho c) \leqq 20$ (3),

wherein σb represents a magnetization (emu/g) of the carrier at 1,000 Oe, ρc represents a true specific gravity of the carrier, and σa represents a magnetization of the carrier determined by the following method including:

(1) magnetically holding the carrier on a cylindrical sleeve having a magnetic pole area located over a magnetic pole and having a peak magnetic flux density of 100 mT in a direction perpendicular to an axis of the cylindrical sleeve;

(2) rotating the cylindrical sleeve around the axis thereof for about 30 min;

(3) removing the carrier from the magnetic pole area by applying a force which is three times as much as a weight of the carrier in the direction perpendicular to the axis of the cylindrical sleeve; and

(4) measuring a magnetization at 1,000 Oe to determine the magnetization σa,

wherein the carrier has a weight-average particle diameter (D4) of about 25 to about 65 μm and includes carrier particles having a weight-average particle diameter not greater than about 12 μm in an amount not greater than about 0.3 % by weight,

wherein a ratio (D4/D1) between the weight-average particle diameter (D4) and a number-average particle diameter of the carrier (D1) is about 1 to about 1.3, and

wherein an electric resistance R is about 1.0×10^9 to about 1.0×10^{11} $\Omega \cdot$ cm when an AC voltage represented by the following formula (4) is applied at a frequency of 1,000 Hz to a magnetic brush of the carrier is formed between parallel plate electrodes having a gap of d mm such that magnetic brush has a space occupancy of about 40 %:

$E\ (V) = 250 \times d \qquad (4),$

wherein d is 0.40±0.05 mm and E is a peak voltage.

Claim 2 (Original): The carrier of Claim 1, wherein the carrier has an average surface vertical interval of about 0.1 to about 2.0 μm.

Claim 3 (Original): The carrier of Claim 1, wherein the layer comprises a resin and an insulative inorganic particulate material.

Claim 4 (Original): The carrier of Claim 1, wherein the magnetic core material includes a particulate ferrite.

Claim 5 (Original): The carrier of Claim 1, wherein the magnetic core material includes a particulate material in which a magnetic material is dispersed in a resin.

Claim 6 (Original): A two-component developer comprising:

a carrier comprising:

a magnetic core material; and

a layer located on a surface of the magnetic core material,

wherein the carrier satisfies the following relationships (1) to (3):

$0.90 \leqq (\sigma a/\sigma b) < 1.00 \qquad (1)$

$200 \leqq (\sigma b \cdot \rho c) \leqq 400$ (2)

$10 \leqq (\sigma b/\rho c) \leqq 20$ (3),

wherein σb represents a magnetization (emu/g) of the carrier at 1,000 Oe, ρc represents a true specific gravity of the carrier, and σa represents a magnetization of the carrier determined by the following method including:

(1) magnetically holding the carrier on a cylindrical sleeve having a magnetic pole area located over a magnetic pole and having a peak magnetic flux density of 100 mT in a direction perpendicular to an axis of the cylindrical sleeve;

(2) rotating the cylindrical sleeve around the axis thereof for about 30 min;

(3) removing the carrier from the magnetic pole area by applying a force which is three times as much as a weight of the carrier in the direction perpendicular to the axis of the cylindrical sleeve; and

(4) measuring a magnetization at 1,000 Oe to determine the magnetization σa,

wherein the carrier has a weight-average particle diameter (D4) of about 25 to about 65 μm and includes carrier particles having a weight-average particle diameter not greater than about 12 μm in an amount not greater than about 0.3 % by weight,

wherein a ratio (D4/D1) between the weight-average particle diameter (D4) and a number-average particle diameter of the carrier (D1) is about 1 to about 1.3, and

wherein an electric resistance R is about 1.0×10^9 to about 1.0×10^{11} $\Omega \cdot$ cm when an AC voltage represented by the following formula (4) is applied at a frequency of 1,000 Hz to a magnetic brush of the carrier is formed between parallel plate electrodes having a gap of d mm such that magnetic brush has a space occupancy of about 40 %:

$E (V) = 250 \times d$ (4),

wherein d is 0.40±0.05 mm and E is a peak voltage; and

a toner comprising:

a binder resin; and

a colorant.

Claim 7 (Original): The two-component developer of Claim 6, wherein the two-component developer comprises the toner in an amount of about 2 to about 12 % by weight.

Claim 8 (Original): The two-component developer of Claim 6, wherein the toner further comprises a release agent.

Claim 9 (Original): The two-component developer of Claim 6, wherein the toner has a weight-average particle diameter of about 4 to about 10 μm.

Claim 10 (Withdrawn): An image developer comprising:

a charger configured to frictionally charge a toner;

a rotatable holder including a magnetic filed generator, which is configured to hold a two-component developer comprising:

a carrier comprising:

a magnetic core material; and

a layer located on a surface of the magnetic core material,

wherein the carrier satisfies the following relationships (1) to (3):

$0.90 \leqq (\sigma a/\sigma b) < 1.00$ (1)

$200 \leqq (\sigma b \cdot \rho c) \leqq 400$ (2)

$10 \leqq (\sigma b/\rho c) \leqq 20$ (3),

wherein σb represents a magnetization (emu/g) of the carrier at 1,000 Oe, ρc represents a true specific gravity of the carrier, and σa represents a magnetization of the carrier determined by the following method including:

(1) magnetically holding the carrier on a cylindrical sleeve having a magnetic pole area located over a magnetic pole and having a peak magnetic flux density of 100 mT in a direction perpendicular to an axis of the cylindrical sleeve;

(2) rotating the cylindrical sleeve around the axis thereof for about 30 min;

(3) removing the carrier from the magnetic pole area by applying a force which is three times as much as a weight of the carrier in the direction perpendicular to the axis of the cylindrical sleeve; and

(4) measuring a magnetization at 1,000 Oe to determine the magnetization σa,

wherein the carrier has a weight-average particle diameter (D4) of about 25 to about 65 μm and includes carrier particles having a weight-average particle diameter not greater than about 12 μm in an amount not greater than about 0.3 % by weight,

wherein a ratio (D4/D1) between the weight-average particle diameter (D4) and a number-average particle diameter of the carrier (D1) is about 1 to about 1.3, and

wherein an electric resistance R is about 1.0×10^9 to about 1.0×10^{11} $\Omega \cdot$ cm when an AC voltage represented by the following formula (4) is applied at a frequency of 1,000 Hz to a magnetic brush of the carrier is formed between parallel plate electrodes having a gap of d mm such that magnetic brush has a space occupancy of about 40 %:

$E\ (V) = 250 \times d \qquad (4),$

wherein d is 0.40±0.05 mm and E is a peak voltage; and

a toner comprising:

a binder resin; and

a colorant; and

an image bearer configured to bear an electrostatic latent image thereon, wherein the electrostatic latent image is developed with the two-component developer at a developing area located between the image bearer and the rotatable holder,

wherein a maximum magnetic flux density B (mT) at the developing area in a normal direction of a surface of the rotatable holder satisfies the following relationship (5):

$(15{,}000/(\sigma a \cdot \rho c)) \leqq B \leqq (50{,}000/(\sigma b \cdot \rho c))$ (5).

Claim 11 (Withdrawn): The image developer of Claim 10, wherein a minimum distance between the rotatable holder and the image bearer is about 0.30 to about 0.80 mm.

Claim 12 (Withdrawn): The image developer of Claim 10, further comprising a voltage applicator configured to apply a DC bias voltage to the rotatable holder.

Claim 13 (Withdrawn): The image developer of Claim 12, wherein the voltage applicator applies a DC bias voltage overlapped with an AC voltage to the rotatable holder.

Claim 14 (Withdrawn): The image developer of Claim 10, further comprising a recycler comprising:

a cleaner configured to clean the image bearer by collecting the toner remaining on a surface of the image bearer; and

a returner configured to return the collected toner to the rotatable holder.

Claim 15 (Withdrawn): An image forming apparatus comprising:

a plurality of image developers configured to develop an electrostatic latent image with a developer to form a toner image;

a transferer configured to transfer the toner image onto a transfer medium; and

a fixer configured to fix the toner image on the transfer medium,

wherein the plurality of image developers includes an image developer comprising:

a charger configured to frictionally charge a toner;

a rotatable holder including a magnetic filed generator, which is configured to hold a two-component developer comprising:

a carrier comprising:

a magnetic core material; and

a layer located on a surface of the magnetic core material,

wherein the carrier satisfies the following relationships (1) to (3):

$0.90 \leqq (\sigma a/\sigma b) < 1.00$ (1)

$200 \leqq (\sigma b \cdot \rho c) \leqq 400$ (2)

$10 \leqq (\sigma b/\rho c) \leqq 20$ (3),

wherein σb represents a magnetization (emu/g) of the carrier at 1,000 Oe, ρc represents a true specific gravity of the carrier, and σa represents a magnetization of the carrier determined by the following method including:

(1) magnetically holding the carrier on a cylindrical sleeve having a magnetic pole area located over a magnetic pole and having a peak magnetic flux density of 100 mT in a direction perpendicular to an axis of the cylindrical sleeve;

(2) rotating the cylindrical sleeve around the axis thereof for about 30 min;

(3) removing the carrier from the magnetic pole area by applying a force which is three times as much as a weight of the carrier in the direction perpendicular to the axis of the cylindrical sleeve; and

(4) measuring a magnetization at 1,000 Oe to determine the magnetization σa,

wherein the carrier has a weight-average particle diameter (D4) of about 25 to about 65 μm and includes carrier particles having a weight-average particle diameter not greater than about 12 μm in an amount not greater than about 0.3 % by weight,

wherein a ratio (D4/D1) between the weight-average particle diameter (D4) and a number-average particle diameter of the carrier (D1) is about 1 to about 1.3, and

wherein an electric resistance R is about 1.0×10^9 to about 1.0×10^{11} Ω · cm when an AC voltage represented by the following formula (4) is applied at a frequency of 1,000 Hz to a magnetic brush of the carrier is formed between parallel plate electrodes having a gap of d mm such that magnetic brush has a space occupancy of about 40 %:

$$E\,(V) = 250 \times d \qquad (4),$$

wherein d is 0.40±0.05 mm and E is a peak voltage; and

a toner comprising:

a binder resin; and

a colorant; and

an image bearer configured to bear an electrostatic latent image thereon, wherein the electrostatic latent image is developed with the two-component developer at a developing area located between the image bearer and the rotatable holder,

wherein a maximum magnetic flux density B (mT) at the developing area in a normal direction of a surface of the rotatable holder satisfies the following relationship (5):

$(15{,}000/(\sigma a \cdot \rho c)) \leqq B \leqq (50{,}000/(\sigma b \cdot \rho c))$ (5).

Claim 16 (Withdrawn): A process cartridge comprising a member selected from the group comprising photoreceptors, chargers, image developers, and cleaners, wherein the image developers include an image developer comprising:

a charger configured to frictionally charge a toner;

a rotatable holder including a magnetic filed generator, which is configured to hold a two-component developer comprising:

a carrier comprising:

a magnetic core material; and

a layer located on a surface of the magnetic core material,

wherein the carrier satisfies the following relationships (1) to (3):

$0.90 \leqq (\sigma a/\sigma b) < 1.00$ (1)

$200 \leqq (\sigma b \cdot \rho c) \leqq 400$ (2)

$10 \leqq (\sigma b/\rho c) \leqq 20$ (3),

wherein σb represents a magnetization (emu/g) of the carrier at 1,000 Oe, ρc represents a true specific gravity of the carrier, and σa represents a magnetization of the carrier determined by the following method including:

(1) magnetically holding the carrier on a cylindrical sleeve having a magnetic pole area located over a magnetic pole and having a peak magnetic flux density of 100 mT in a direction perpendicular to an axis of the cylindrical sleeve;

(2) rotating the cylindrical sleeve around the axis thereof for about 30 min;

(3) removing the carrier from the magnetic pole area by applying a force which is three times as much as a weight of the carrier in the direction perpendicular to the axis of the cylindrical sleeve; and

(4) measuring a magnetization at 1,000 Oe to determine the magnetization σa,

wherein the carrier has a weight-average particle diameter (D4) of about 25 to about 65 μm and includes carrier particles having a weight-average particle diameter not greater than about 12 μm in an amount not greater than about 0.3 % by weight,

wherein a ratio (D4/D1) between the weight-average particle diameter (D4) and a number-average particle diameter of the carrier (D1) is about 1 to about 1.3, and

wherein an electric resistance R is about 1.0×10^9 to about 1.0×10^{11} $\Omega \cdot$ cm when an AC voltage represented by the following formula (4) is applied at a frequency of 1,000 Hz to a magnetic brush of the carrier is formed between parallel plate electrodes having a gap of d mm such that magnetic brush has a space occupancy of about 40 %:

$$E\,(V) = 250 \times d \qquad (4),$$

wherein d is 0.40±0.05 mm and E is a peak voltage; and

a toner comprising:

a binder resin; and

a colorant; and

an image bearer configured to bear an electrostatic latent image thereon, wherein the electrostatic latent image is developed with the two-component developer at a developing area located between the image bearer and the rotatable holder,

wherein a maximum magnetic flux density B (mT) at the developing area in a normal direction of a surface of the rotatable holder satisfies the following relationship (5):

$(15{,}000/(\sigma a \cdot \rho c)) \leqq B \leqq (50{,}000/(\sigma b \cdot \rho c))$ (5).

Claim 17 (Original): A carrier comprising:

a magnetic core material; and

a layer located on a surface of the magnetic core material,

wherein the carrier satisfies the following relationships (1) to (3):

$0.90 \leqq (\sigma a/\sigma b) < 1.00$ (1)

$200 \leqq (\sigma b \cdot \rho c) \leqq 400$ (2)

$10 \leqq (\sigma b/\rho c) \leqq 20$ (3),

wherein σb represents a magnetization (emu/g) of the carrier at 1,000 Oe, ρc represents a true specific gravity of the carrier, and σa represents a magnetization of the carrier determined by the following apparatus including:

(1) means for magnetically holding the carrier on a cylindrical sleeve having a magnetic pole area located over a magnetic pole and having a peak magnetic flux density of 100 mT in a direction perpendicular to an axis of the cylindrical sleeve;

(2) means for rotating the cylindrical sleeve around the axis thereof for about 30 min;

(3) means for removing the carrier from the magnetic pole area by applying a force which is three times as much as a weight of the carrier in the direction perpendicular to the axis of the cylindrical sleeve; and

(4) means for measuring a magnetization at 1,000 Oe to determine the magnetization σa,

wherein the carrier has a weight-average particle diameter (D4) of about 25 to about 65 μm and includes carrier particles having a weight-average particle diameter not greater than about 12 μm in an amount not greater than about 0.3 % by weight,

wherein a ratio (D4/D1) between the weight-average particle diameter (D4) and a number-average particle diameter of the carrier (D1) is about 1 to about 1.3, and

wherein an electric resistance R is about 1.0×10^9 to about 1.0×10^{11} Ω · cm when an AC voltage represented by the following formula (4) is applied at a frequency of 1,000 Hz to a magnetic brush of the carrier is formed between parallel plate electrodes having a gap of d mm such that magnetic brush has a space occupancy of about 40 %:

$$E\ (V) = 250 \times d \qquad (4),$$

wherein d is 0.40±0.05 mm and E is a peak voltage.

Claim 18 (Original): The carrier of Claim 17, wherein the carrier has an average surface vertical interval of about 0.1 to about 2.0 μm.

Claim 19 (Original): The carrier of Claim 17, wherein the layer comprises a resin and an insulative inorganic particulate material.

Claim 20 (Original): The carrier of Claim 17, wherein the magnetic core material includes a particulate ferrite.

Claim 21 (Original): The carrier of Claim 17, wherein the magnetic core material includes a particulate material in which a magnetic material is dispersed in a resin.

Claim 22 (New): The carrier of Claim 1, wherein the σb of the carrier at 1,000 Oe is measured by a multi-sample rotational magnetization measurer.

Claim 23 (New): The carrier of Claim 17, wherein the σb of the carrier at 1,000 Oe is measured by a multi-sample rotational magnetization measurer.